EBN Technology Corp.

User Manual

POS 70 Series

*POS70-2EB-370
*POS70-2EB-478
*POS70-5EB-370
*POS70-5EB-478

Mar. 2007

©Copyright 2007 by EBN Technology Corp. All Rights Reserved.

Copyright Notice

The information in this document is subject to change without prior notice in order to improve reliability, design and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

Trademarks

Intel is a registered trademark of Intel Corporation. AMI is registered trademarks of AMI SOFTWARE INTERNATION, INC. Other product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

Contents

Chapter 1 – Introduction 5
1.1 System Overview 5
1.1.1 System Outlook 5
1.1.2 Rotating Angle 6
1.1.3 System Maintain 6
1.1.4 I/O Ports 7
1.2 Specifications 8
Chapter 2 – Packing List 12
Chapter 3 – Getting Started 17
3.1 System setup 17
3.2 Hardware Installation 18
3.2.1 CPU Installation 18
3.2.2 Memory Installation 19
3.2.3 HDD Installation 20
3.2.4 OS Installation 21
3.3 Software Installation 22
3.3.1 Driver Installation 22
3.3.2 Touch Panel Calibration 24
3.4 Optional Items Installation 26
3.4.1 MSR / RFID 26
3.4.2 Pole Display 30
3.4.3 2nd Display 31
Chapter 4 – BIOS setup 33
4.1 P4 M/B 34
4.1.1 Starting Setup 34
4.1.2 Resolution setup 35
4.2 P3 M/B 37
4.2.1 Starting Setup 37
4.2.2 Resolution setup 38
Chapter 5 – M/B Information 40
5.1 P4 M/B Jumper Setting 41
5.2 P3 M/B Jumper Setting 42
5.3 COM & RJ-11 Jumper Settings 44
5.4 Cash Drawer Introduction 44
Chapter 6 – Reversion History 47

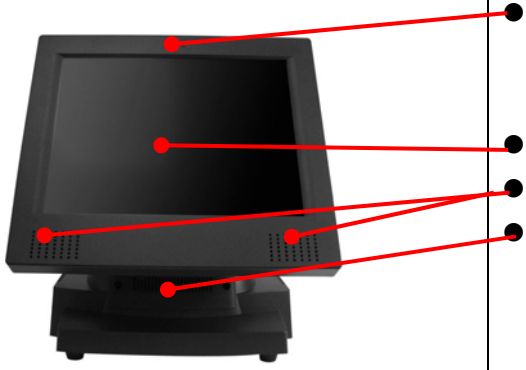
CHAPTER 1

Introduction

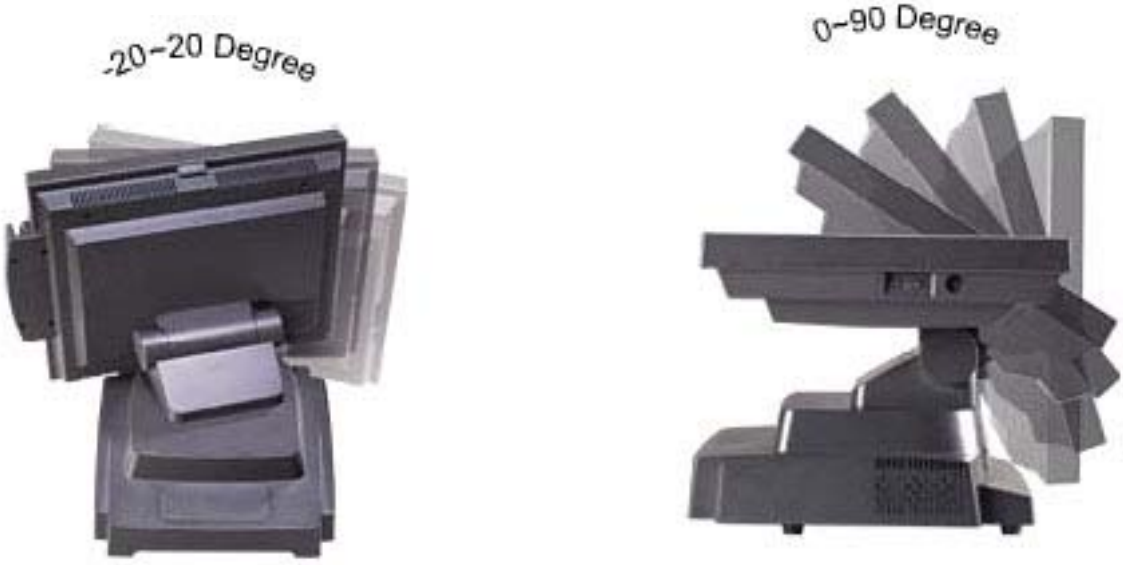
Chapter 1 – Introduction

1.1 System Overview

1.1.1 System Outlook

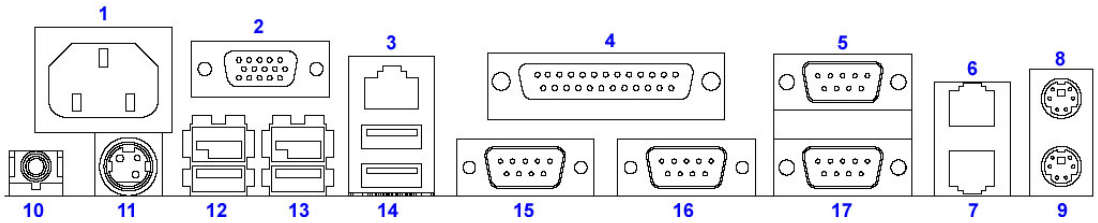
	● Power LED HDD LED LAN LED ● TFT LCD ● Speakers ● HDD Case
	● Customer Display (Options) ● MSR (Options)
	● Maintaining screws
	● Mounting hole for Pole Display or 2nd Display ● COM RI/5V/12V selection ● System Fan

1.1.2 Rotating Angle



1.1.3 System Maintain

1.1.4 I/O Ports



Number	Description
1	AC Power Connector
2	VGA (For EBN 2nd display only)
3	LAN
4	Printer Port (LPT)
6	Cash Drawer 2
7	Cash Drawer 1
8	PS/2 Mouse
9	PS/2 Keyboard
10	Audio
11	DC 24V (For Receipt Printer Power)
12	Power USB (24V)
13	Power USB (12V)
14	USB x 2
15	COM 1
16	COM 2
17	COM 3
5	COM 4

1.2 Specifications

System		
Model	**SolidPOS 72**	**SolidPOS 75**
P3	**POS70-2EB-370**	**POS70-5EB-370**
P4	**POS70-5EB-478**	**POS70-5EB-478**
Main Board		
CPU	P3: Intel Celeron / PIII 1.2GHz P4: Intel Mobile Celeron 1.2GHz , Celeron 2.0GHz , P4 2.0GHz	
Core Logic	P3: VIA CLE 266 (VT8623+VT8235) P4: Intel 852GM + ICH4	
System Memory	DIMM, DDR266/333, 128MB up to 1GB	
OS Support	Win2000, NT, Win XP, Embedded XP(XPe), WinCE, WEPOS	
Display		
TFT LCD	12.1”	15”
Brightness	300 nits	250 nits
Resolution	800 x 600	1024 x 768
Touch Screen	7 Wire Resistive Type	
Tilt Angle	0 ~ 90 Degree	
Swivel Angle	-20 ~20 Degree	
Storage Device		
HDD	1 x EIDE 3.5” Type	
Compact Flash	1 x Slot Type II, Non-removable	
I/O Ports		
Serial	6 x RS-232 COM 1/ 2/ 3/ 4: DB-9, male, (Pin1 W/ DCD or 5V or 12V Selectable, Pin 9 W/ RI or 5V or 12V Selectable) COM 5/ 6: Internal for MSR and Touch Panel	

Parallel	1 x DB-25, female, supports SPP/EPP/ECP	
USB	4 x USB 2.0 2 x USB2.0 1 x USB2.0 W/ 12V 1 x USB2.0 W/ 24V	
PS/2 Mouse	1 x 6-pin mini DIN	
PS/2 KB	1 x 6-pin mini DIN	
LAN	1 x RJ45, 10/100 Base-T, supports wake on LAN	
VGA	1 x DB-15, female	
Cash Drawer	2 x RJ11 (Power Pin 12/24V Selectable)	
Audio	1x Audio Jack Out	
	AC97 2.0 Compliant, Speaker 2W x 2	
Expansion	1 x Mini PCI	
Others		
Power Input	220W ATX with 100 - 240 VAC input @ 50 - 60 Hz / 5A	
Color	Gray	
Compliance	FCC / CE / WEEE / RoHS	
Weight(Kgs)	12	12.5
Dimension(mm) W x D x H	340 x 275 x 350	370 x 277 x 405
Operating Temperature	5 ℃ ~ 40 ℃	
Storage Temperature	-20°C ~ 60°C	
Storage Humidity	20% - 85% RH, non-condensing	
Main Unit Ordering Information		
POS70-2EB-370	12.1” TFT SolidPOS W/ Intel P3 Socket 370	
POS70-2EB-478	12.1” TFT SolidPOS W/ Intel P4 Socket 478,	
POS70-5EB-370	15” TFT SolidPOS W/ Intel P3 Socket 370,	
POS70-5EB-478	15” TFT SolidPOS W/ Intel P4 Socket 478	
Optional Accessories Ordering Information		
A10400062RH	2nd Display 12.1” TFT LCD	
A10400107RH	2nd Display 15” TFT LCD	
A10400264RH	Customer Display: LCD Pole Display, 20 x 2 characters, RS-232 Type (Gray)	
A10400265RH	Customer Display: VFD Pole Display, 20 x 2 characters, RS-232 Type (Gray)	
A10400010RH	MSR: 2 Tracks, KB Type	
A10400009RH	MSR: 3 Tracks, KB Type	
A10400023RH	MSR: 2 Tracks, RS-232 Type	
A10400024RH	MSR: 3 Tracks, RS-232 Type	
A10400019RH	I Button: PS/2 Type	

A10400121RH	MSR+ I Button: 2 Tracks, KB Type and I Button PS/2 Type
A10400120RH	MSR+ I Button: 3 Tracks, KB Type and I Button PS/2 Type
A10400104RH	MSR+ Smart Card: 3 Tracks, RS-232 Type and Smart Card USB Type
A10400005RH	RFID : RS-232 Type
A10400266RH	WIRELESS LAN 802.11b/g MINI PCI MODULE W/ Antenna
20900001RH	OS: Win XP Professional (English Version)
20900008RH	OS: WinXP Home (English Version)
20900003RH	OS: Win 2000 Professional (English Version)
20900002RH	OS: WEPOS (English Version)

CHAPTER 2

Packing List

Chapter 2 – Packing List

The unit comes securely packaged in a shipping carton. Please contact your dealer if you find that anything is missing or damaged after examining the contents. The shipping carton should contain the following standard items :

2.1 Standard Items

	● Main Unit
	● Driver CD (Include manual)
	● Printer power extension cable (24V)

	• IDE extension cable
	• HDD & CD-ROM power extension cable
	• Power Cord (The picture varies from the area you locate)

2.2 Optional Items

	2nd Display
	Customer Display (LED, VFD, LCD)
	3-in-1 Card Reader (MSR, Smart Card, i-Button)
	RFID

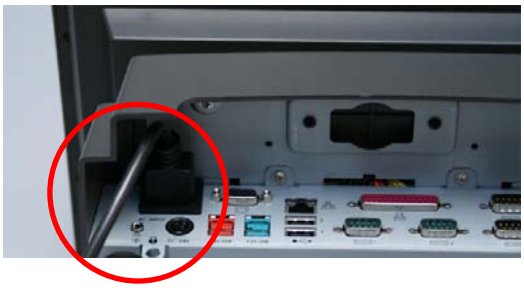
MSR

CHAPTER 3

Getting Started

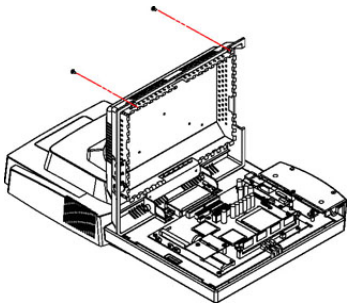
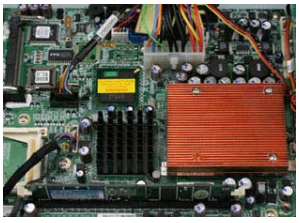
Chapter 3 – Getting Started

3.1 System setup

Item	Photo	Description
1		Plug-in power cord and connect with AC power
2		Push “Start Button”

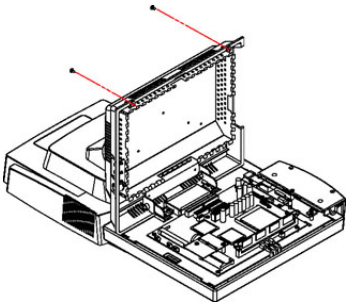
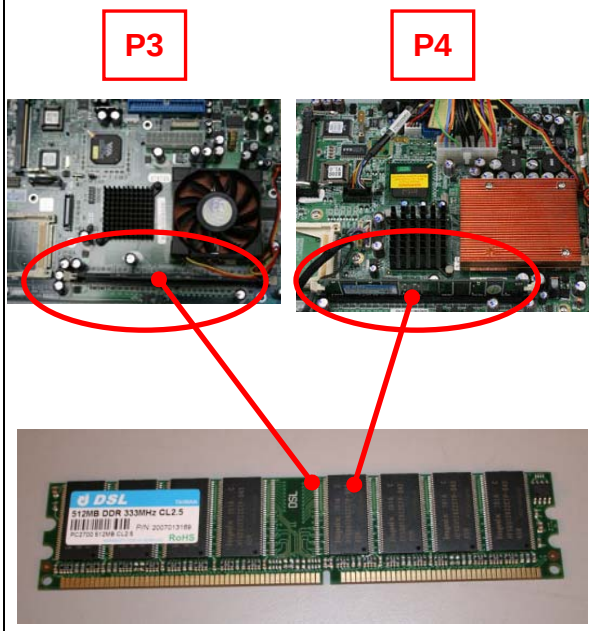
3.2 Hardware Installation

3.2.1 CPU Installation

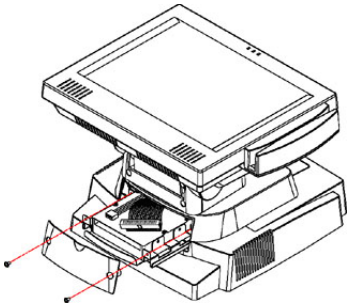
Item	Photo	Description
1		Remove 2 screws
2	P3 P4	Install CPU and apply the thermal adhesive
3	P3 P4 	Install thermal module

3.2.2 Memory Installation

The POS system supports memory up to 1 GHz with frequency of DDR266 and DDR333.
Please follow the below procedures for installation.
1. Remove 2 screws from the system
2. Insert the memory module

Item	Photo	Description
1		Remove 2 screws
2		Install Memory module

3.2.3 HDD Installation

Item	Photo	Description
1		Remove 2 screws from HDD cover and pull out the metal case.
2		Install HDD in the metal case.
3		Slide the HDD into the POS system and connect IDE & Power Cable.
4		Screw 2 screws on the HDD cover

3.2.4 OS Installation

a. Please prepare a USB CD-ROM .
b. Plug a USB CD-ROM into the USB port of POS system .
c. Turn on the system and enter CMOS configuration page
d. Set the boot up device as USB CD-ROM
e. Reboot the system
f. Install OS step by step

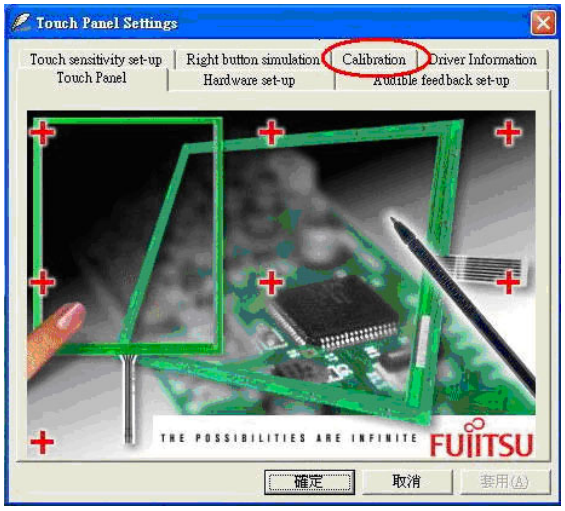
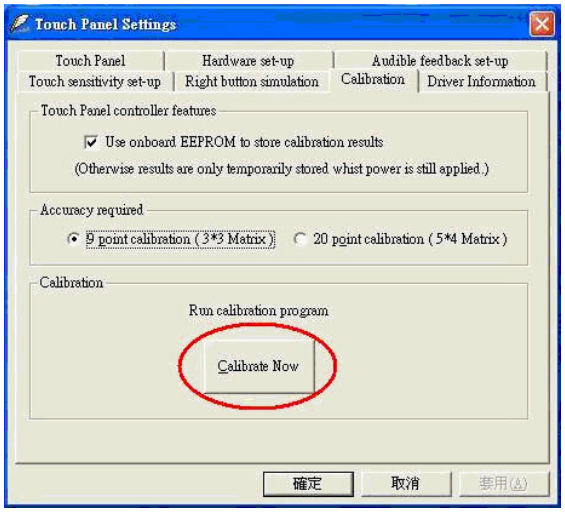
3.3 Software Installation

3.3.1 Driver Installation

Item	Photo	Description
1		Insert driver CD and select POS 7series
2		Select your model (P3 or P4)
3		Install related driver

DRIVER BANK
P4
Products Selection
* INTEL Chipset Driver
* Graphics Driver
* Touch Driver
* RTL8100BL Lan Driver
* AC'97 Audio Driver
* Wireless Lan Driver
* Smart Card Reader Driver
* DirectX8.1 / Acrobat Reader / Card Reader Utility
* POS7 P4 Series USER Manual
Browse this CDROM
EXIT

3.3.2 Touch Panel Calibration

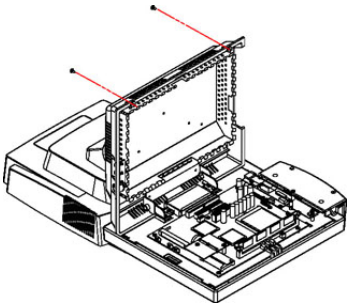
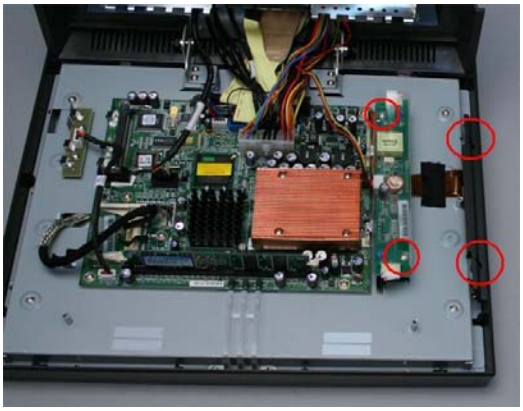
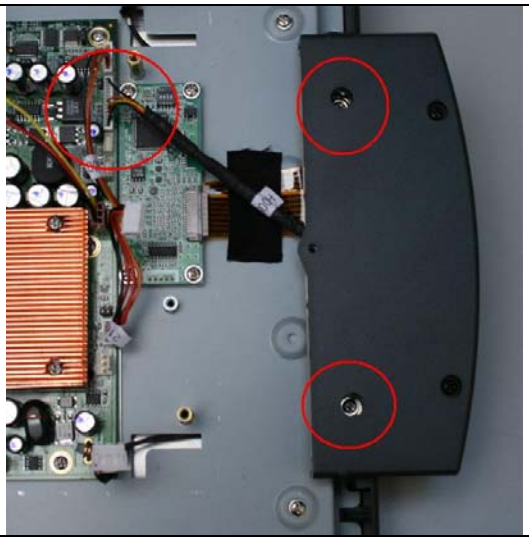
Item	Photo	Description
1		Execute “Touch Panel” from Windows Control Panel
2		Click at “Calibration”
3		Click at “Calibrate Now”

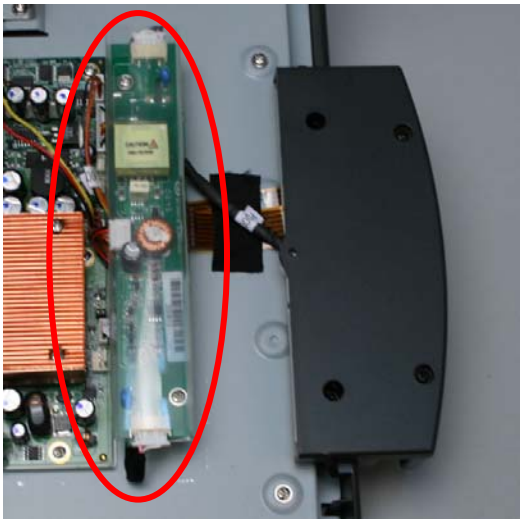
4		Start calibrate

3.4 Optional Items Installation

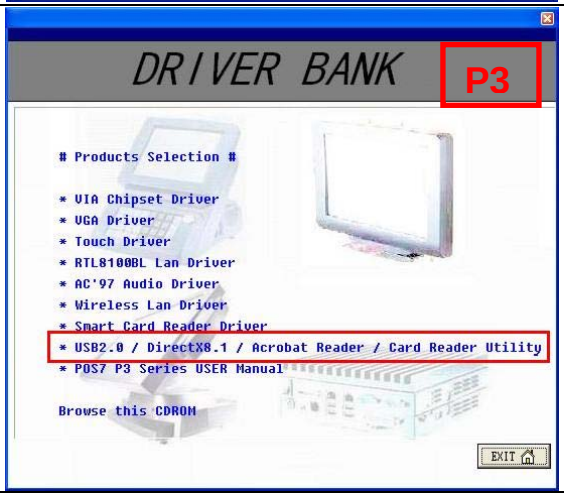
3.4.1 MSR / RFID

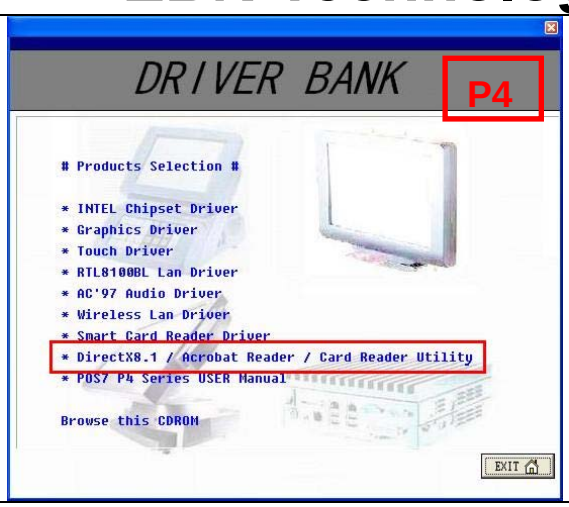
Install hardware

Item	Photo	Description
1		Remove 2 screws from POS system
2		Remove plastic cover and inverter of system
3		Install the MSR / RFID module on the system

4		Connect MSR cable to CN12
5		Install inverter

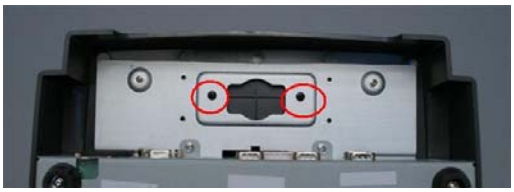
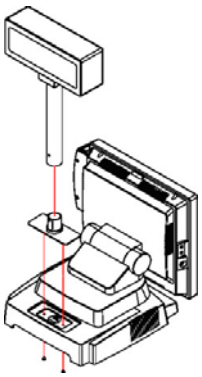
Driver Installation

Item No.	Photo	Description
1		Insert driver CD and select POS 7series
2		Select your model (P3 or P4)
3		Install related driver



Also you could install it form the following path.
(CD-ROM):\Driver\Options Driver\MSR(Megnetic Stripe Reader) Driver\Driver\Disk1\Setup.exe

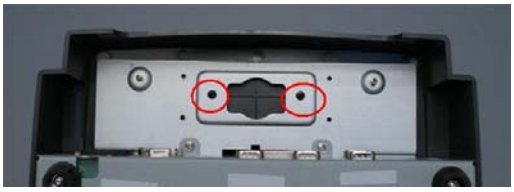
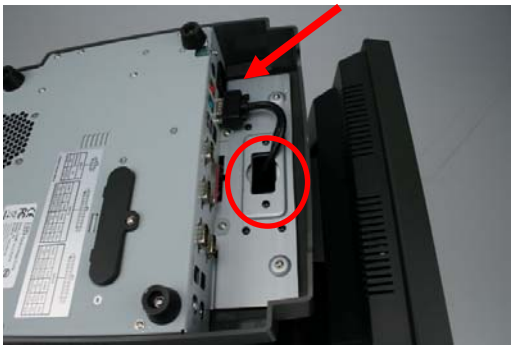
3.4.2 Pole Display

Item	Photo	Description
1		Remove plastic cover
2		Install Pole Display Kit
3		Connect RS232 cable to COM1

Note:
Be sure to adjust jumper setting of COM1. Modify pin9 to supply 12V power.
For more information, please refer to chapter **5.3**

3.4.3 2nd Display

Hardware Installation

Item	Photo	Description
1		Remove plastic cover
2		Adjust POS system angle
3		Screw on 2nd display and plug in the cable

2nd Display with touch panel

If you order the 2nd display comes with touch panel, please remember to adjust the COM port setting on the bottom side of POS system. So that it could supply 5V DC on pin 1 for touch panel.

Note:

1. **The pin 6 of 2nd VGA cable supply 12V DC power directly, so it doesn't need to connect with any external power adapter.**
2. **The VGA port of the POS system is designed specifically for our display kits. So please do not connect to any normal monitor or LCD.**

Pin	Assignment
1	RED
2	GREEN
3	BLUE
4	Monitor ID bit 2
5	Ground
6	+12VDC Output
7	GREEN Ground
8	BLUE Ground
9	no pin (keyway)
10	Sync Ground
11	Monitor ID bit 0
12	Monitor ID bit 1
13	Horizontal Sync
14	Vertical Sync
15	Not Used

CHAPTER 4

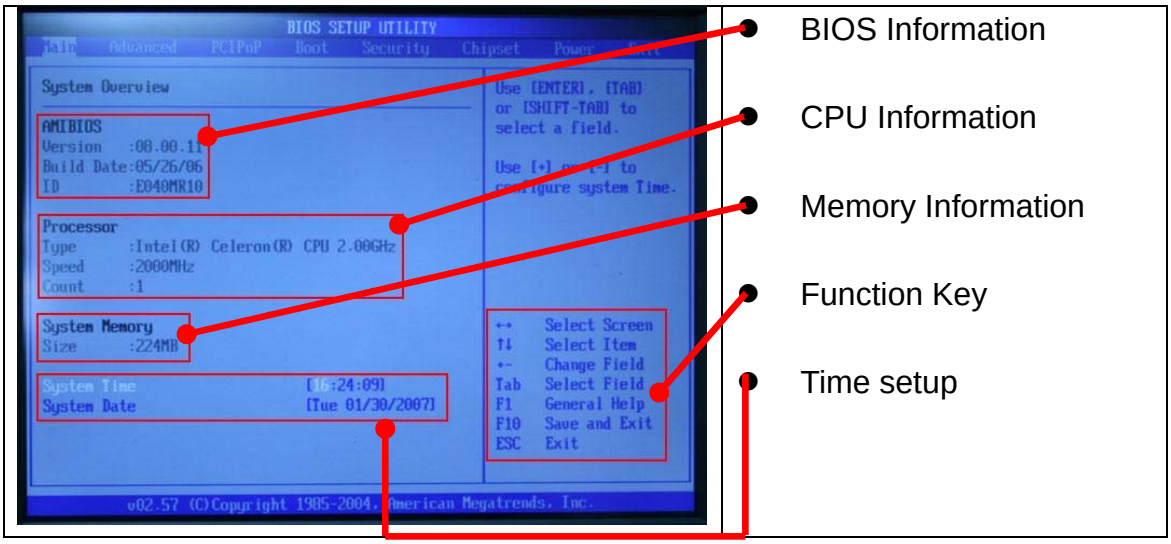
BIOS setup

4.1 P4 M/B

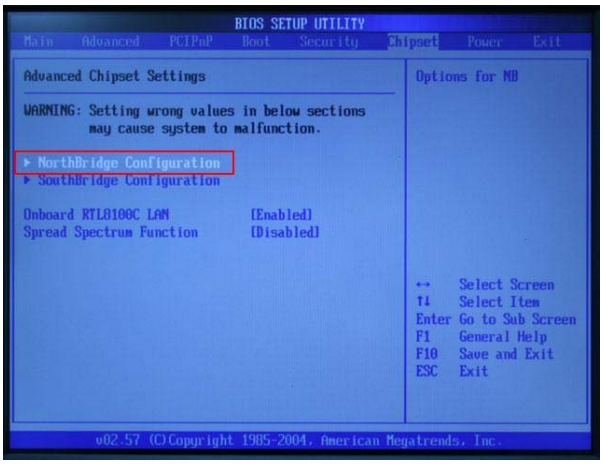
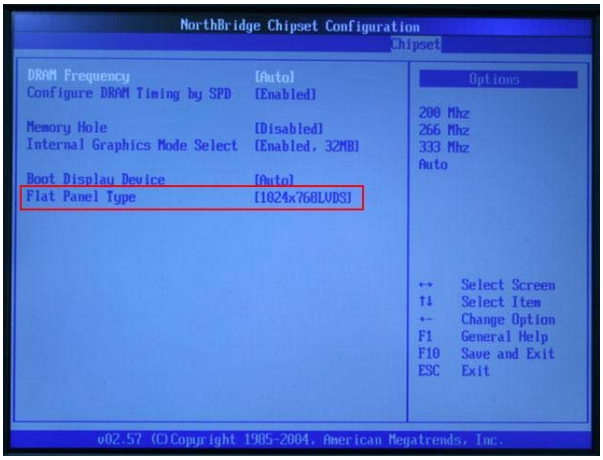
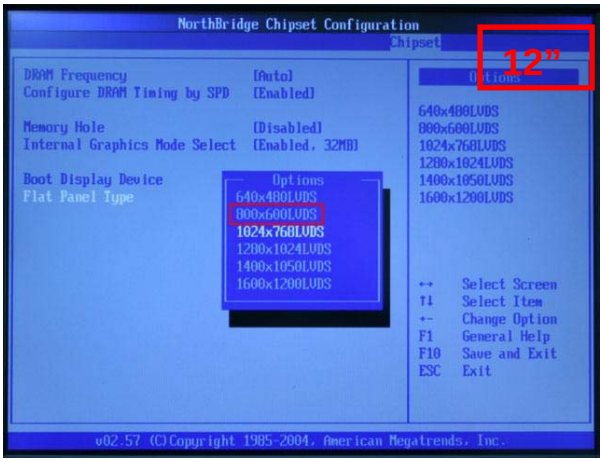
(POS70-2EB-478, POS70-5EB-478)

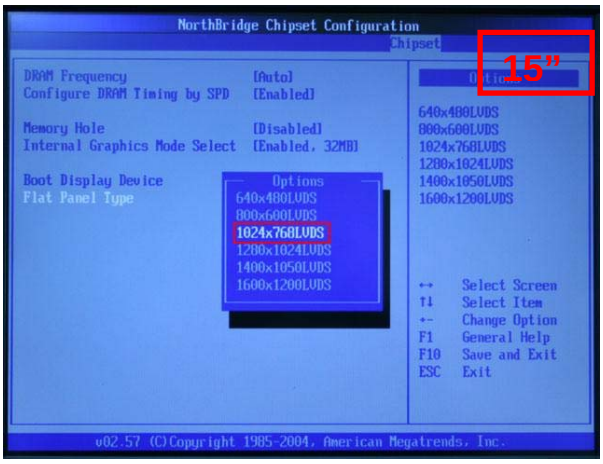
4.1.1 Starting Setup

To enter BIOS, please click at “Delete” when booting up the POS system and you will see the picture below.



4.1.2 Resolution setup

Item	Photo	Description
1		Enter “Northbridge Configuration” of “Chipset”
2		Enter “Flat Panel Type”
3		Choose your panel type 12” – 800x600 15” – 1024x768

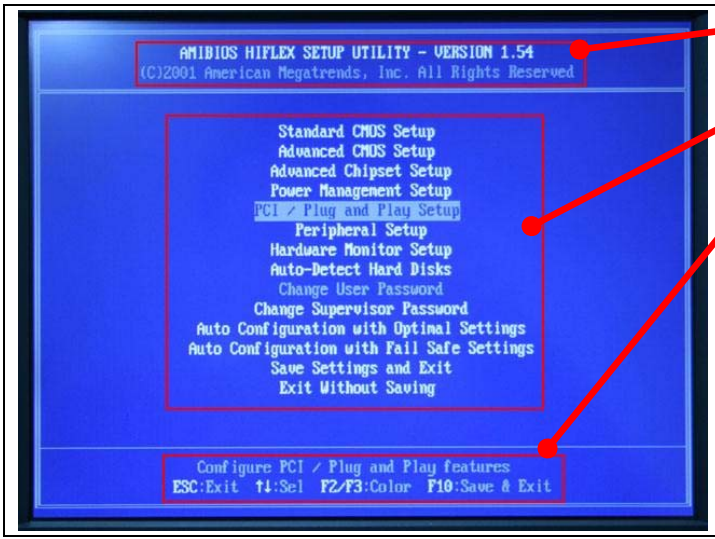
	 NorthBridge Chipset Configuration Chipset 15" DRAM Frequency [Auto] Configure DRAM Timing by SPD [Enabled] Memory Hole [Disabled] Internal Graphics Mode Select [Enabled, 32MB] Boot Display Device Flat Panel Type Options 640x480LVDS 800x600LVDS 1024x768LVDS 1280x1024LVDS 1400x1050LVDS 1600x1200LVDS 640x480LVDS 800x600LVDS 1024x768LVDS 1280x1024LVDS 1400x1050LVDS 1600x1200LVDS ↔ Select Screen ↑↓ Select Item +- Change Option F1 General Help F10 Save and Exit ESC Exit v02.57 (C)Copyright 1985-2004, American Megatrends, Inc.	

4.2 P3 M/B

(POS70-2EB-370, POS70-5EB-370)

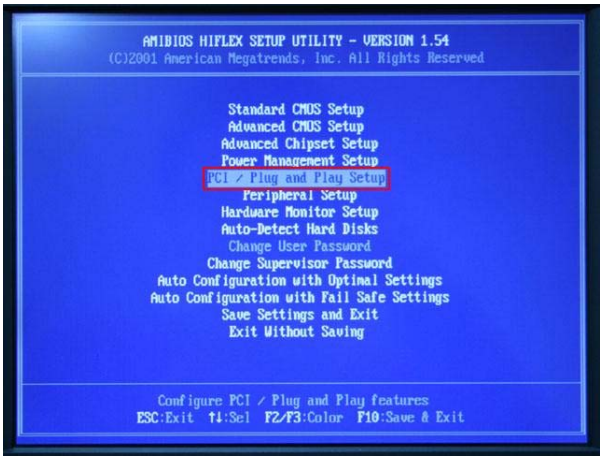
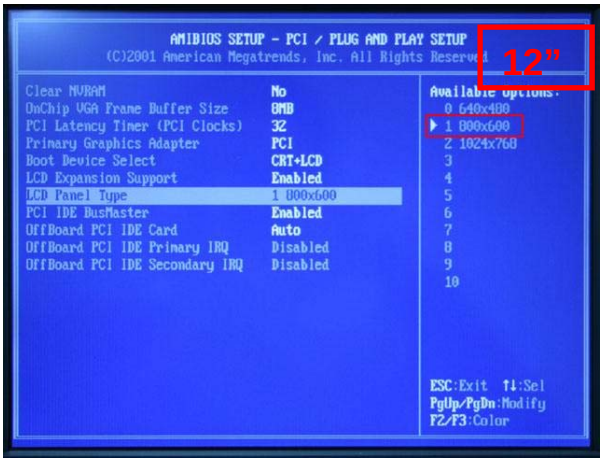
4.2.1 Starting Setup

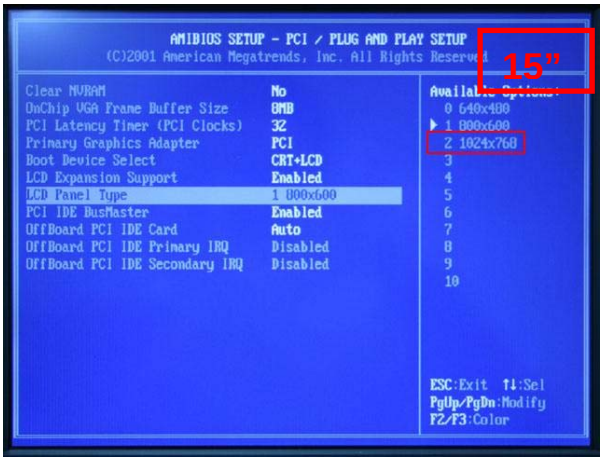
To enter BIOS, please click at “Delete” when booting up the POS system and you will see the picture below.


AMIBIOS HIFLEX SETUP UTILITY - VERSION 1.54
(C)2001 American Megatrends, Inc. All Rights Reserved
Standard CMOS Setup
Advanced CMOS Setup
Advanced Chipset Setup
Power Management Setup
PCI / Plug and Play Setup
Peripheral Setup
Hardware Monitor Setup
Auto-Detect Hard Disks
Change User Password
Change Supervisor Password
Auto Configuration with Optimal Settings
Auto Configuration with Fail Safe Settings
Save Settings and Exit
Exit Without Saving
Configure PCI / Plug and Play features
ESC:Exit ↑↓:Sel F2/F3:Color F10:Save & Exit

- BIOS Information
- BIOS Menu
- Function Key

4.2.2 Resolution setup

Item	Photo	Description
1		Enter “PCI / Plug and Play Setup” page of BIOS
2		Select “LCD Panel Type”
3		Choose your panel type by “Page UP” & “Page Down” 12” – 800x600 15” – 1024x768

	 AMIBIOS SETUP - PCI / PLUG AND PLAY SETUP (C)2001 American Megatrends, Inc. All Rights Reserved 15" Clear NVRAM No OnChip VGA Frame Buffer Size 8MB PCI Latency Timer (PCI Clocks) 32 Primary Graphics Adapter PCI Boot Device Select CRT+LCD LCD Expansion Support Enabled LCD Panel Type 1 800x600 PCI IDE BusMaster Enabled OffBoard PCI IDE Card Auto OffBoard PCI IDE Primary IRQ Disabled OffBoard PCI IDE Secondary IRQ Disabled 0 640x480 1 800x600 2 1024x768 3 4 5 6 7 8 9 10 ESC:Exit ↑↓:Sel PgUp/PgDn:Modify F2/F3:Color	

CHAPTER 5

M/B Information

5.1 P4 M/B Jumper Setting

(POS70-2EB-478, POS70-5EB-478)

Clear CMOS Setup

If you want to clear the CMOS Setup (for example forgot the password you should clear the setup and then set the password again.), you should close the JP1 about 3 seconds, then open again. Set back to normal operation mode.

JP1: Clear CMOS Setup

JP1	Description
1-2	Keep CMOS Setup (Normal Operation)
2-3	Clear CMOS Setup

Compact Flash Card Master/Slave Mode Setting

JP2: Master/Slave Mode Setting

JP2	Description
OPEN	SLAVE
SHORT	MASTER

Keyboard Setting

JP3: Keyboard Setting

JP3	Description
Open	Disabled
Short	Enabled

DCD or DTR Select of COM6 Setting

JP4: DCD/DTR Setting

JP4	Description
1-2	DCD
2-3	DTR

Pentium 4/Mobile P4/Mobile P4-M Select

JP7: Pentium 4/Mobile P4/Mobile Pentium 4-M Select

JP7	Description
1-2	Pentium 4
2-3	Mobile Celeron/P4-M

LCD Power setting

JP8: This jumper is for the setting of LCD panel voltage.

JP8	Description
1-2	+3.3V
3-4	+5V

5.2 P3 M/B Jumper Setting

(POS70-2EB-370, POS70-5EB-370)

Compact Flash Card Master/Slave Mode Setting

JP1: Master/Slave Mode Setting

JP1	Description
OPEN	SLAVE
SHORT	MASTER

LCD Power setting

JP2: This jumper is for the setting of LCD panel voltage.

JP2	Description
2-4	+3.3V
4-6	+5V

JP2: This jumper is for the setting of LCD panel shift clock.

JP2	Description
1-3	Inverted
3-5	Normal

Clear CMOS Setup

If you want to clear the CMOS Setup (for example forgot the password you should clear the setup and then set the password again.), you should close the JP5 about 3 seconds, then open again. Set back to normal operation mode.

JP5: Clear CMOS Setup

JP5	Description
2-3	Keep CMOS Setup (Normal Operation)
1-2	Clear CMOS Setup

ATX / AT Power Use Selection

JP8: This jumper is for the setting of Power use selection.

JP8	Description
OPEN	ATX Power
CLOSE	AT Power

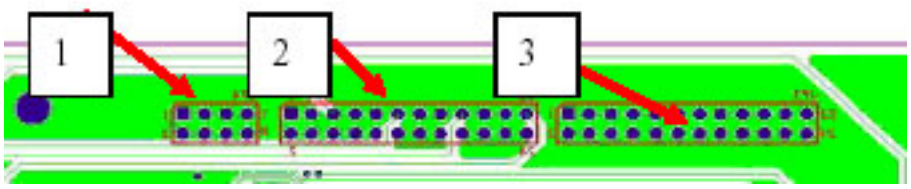
DCD or DTR Select of COM6 Setting

JP10: DCD/DTR Setting

JP10	Description
1-2	DCD
2-3	DTR

5.3 COM & RJ-11 Jumper Settings

Before installing the cash drawer or any peripherals which use COM ports, please make sure you configure all the “Power” settings accurately.



1. Cash Drawer

Cash Drawer	JP4
12V	5-6,7-8
24V	1-2,3-4

2. COM1 & COM2

COM 1	Pin 1	Pin9	COM 2	Pin1	Pin9
5V	21-22	15-16	5V	9-10	3-4
12V	19-20	13-14	12V	7-8	1-2
DCD/RI	23-24	17-18	DCD/RI	11-12	5-6

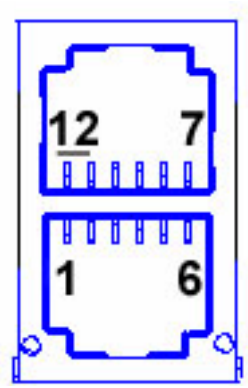
3. COM3 & COM4

COM 3	Pin 1	Pin9	COM 4	Pin1	Pin9
5V	21-22	15-16	5V	9-10	3-4
12V	19-20	13-14	12V	7-8	1-2
DCD/RI	23-24	17-18	DCD/RI	11-12	5-6

5.4 Cash Drawer Introduction

The POS system provides RJ-11 x 2 for cash drawer. And both could support 12V & 24V cash drawer which could be configured on the bottom side of POS system. For more information of configuration, please refer to chapter 3.3.

Pin Assignment



Pin	Assignment	Pin	Assignment
1	GND	7	GND
2	DOUT 0	8	DOUT 1
3	DIN 0	9	DIN 1
4	12V/24V	10	12V/24V
5	NC	11	NC
6	GND	12	GND

I/O Address

I/O Address: 280H (For both Cash Drawers which are controlled by data bit)

Cash Drawer 1: DIN0=>Bit0, DOUT0=>Bit4

Cash Drawer 2: DIN1=>Bit1, DOUT1=>Bit5

CHAPTER 6

Reversion

Chapter 6 – Reversion History

Version	Item	Descriptions	Page